

**Species Listing PROPOSAL Form:**  
**Listing Endangered, Threatened, and Special Concern Species in Massachusetts**

Scientific name: Carex baileyi

Current Listed Status (if any): Endangered

Common name: Bailey's Sedge

**Proposed Action:**

☐ Add the species, with the status of : \_\_\_\_\_

☐ Remove the species

☒ Change the species' status to: Threatened

Change the scientific name to: \_\_\_\_\_

Change the common name to: \_\_\_\_\_

(Please justify proposed name change.)

**Proponent's Name and Address:**

**Melissa Dow Cullina, Botanist**  
**Natural Heritage & Endangered Species Program**  
**Massachusetts Division of Fisheries & Wildlife**  
**1 Rabbit Hill Road, Westborough, MA 01581**

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Association, Institution or Business represented by proponent: **NHESP**

Proponent's Signature:

Date Submitted: **January 18, 2008**

Please submit to: Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, 1 Rabbit Hill Road, Westborough, MA 01581

**Justification**

Justify the proposed change in legal status of the species by addressing each of the criteria below, as listed in the Massachusetts Endangered Species Act (MGL c. 131A) and its implementing regulations (321 CMR 10.00), and provide literature citations or other documentation wherever possible. Expand onto additional pages as needed but make sure you address all of the questions below. The burden of proof is on the proponent for a listing, delisting, or status change.

- (1) **Taxonomic status.** Is the species a valid taxonomic entity? Please cite scientific literature.

**Carex baileyi Britton is a valid taxonomic entity. It was first described in 1895 (Bull. Torrey Bot. Club 22: 220).**

- (2) **Recentness of records.** How recently has the species been conclusively documented within Massachusetts?

**Carex baileyi has been observed numerous times in Massachusetts during the past 20 years. First documented in Massachusetts in 1916 by Judge J. Churchill, the plant was considered to be historic in the Commonwealth until it was rediscovered in 1988 by Pamela Weatherbee. In 1989, Program Botanist Bruce**

Sorrie listed the sedge as Endangered. According to NHESP data, the species was most recently observed by Charles Quinlan in the town of Savoy during 2005.

(3) **Native species status.** Is the species indigenous to Massachusetts?

Yes, this species is native to Massachusetts (Sorrie and Somers, 1999).

(4) **Habitat in Massachusetts.** Is a population of the species supported by habitat within the state of Massachusetts?

Yes; several populations are supported by habitat such as cool, open swampy woods and thickets. Often the sedge is found near seeps or streams. Woodlands supporting *C. baileyi* are of mixed hardwoods and softwoods with openings or a thin overstory. Underlying soils are mesic to hydric, over acidic or circumneutral bedrock.

(5) **Federal Endangered Species Act status.** Is the species listed under the federal Endangered Species Act? If so, what is its federal status (Endangered or Threatened)?

No.

(6) **Rarity and geographic distribution.**

(a) Does the species have a small number of occurrences (populations) and/or small size of populations in the state? Are there potentially undocumented occurrences in the state, and if so, is it possible to estimate the potential number of undocumented occurrences?

Six occurrences (populations) are currently known in Massachusetts; three of these populations contain two or more separate stations. Altogether, there are twelve known “stations” comprising at least 500 individuals. There is much additional unsearched, appropriate habitat in the vicinity of the existing populations.

(b) What is the extent of the species’ entire geographic range, and where within this range are Massachusetts populations (center or edge of range, or peripherally isolated)? Is the species a state or regional endemic?

*Carex baileyi* is a North American species of the Appalachian Mountain region, ranging from southwestern Quebec and New Hampshire, south to West Virginia and Tennessee (Flora of North America Editorial Committee, 2002). Within Massachusetts, which is in the north-central portion of the species’ range, *C. baileyi* has been documented from five towns. Modern records are all from the relatively high-elevation jurisdictions of Cheshire, Windsor, Savoy and Adams; an outlying historical record is from New Marlborough.

(7) **Trends.**

(c) Is the species decreasing (or increasing) in state distribution, number of occurrences, and/or population size? What is the reproductive status of populations? Is reproductive capacity naturally low? Has any long-term trend in these factors been documented?

The number of occurrences has been increasing due to additional survey effort in the habitats and region of the state in which *C. baileyi* occurs.

(8) **Threats and vulnerability.**

(d) What factors are driving a decreasing trend, or threatening reproductive status in the state? Please identify and describe any of the following threats, if present: habitat loss or degradation; predators, parasites, or competitors; species-targeted taking of individual organisms or disruption of breeding activity.

**Several populations occur in openings along roadsides; threats to these occurrences are road-related activities such as grading and culvert maintenance. Habitat conversion is another potential threat to this species.**

(e) Does the species have highly specialized habitat, resource needs, or other ecological requirements? Is dispersal ability poor?

**In Massachusetts, the species is limited by the cool, moist to swampy habitats of the Berkshire Plateau or Greylock Range (see Weatherbee, 1996). Little is known about its dispersal ability, although its inflated perigynia suggest that flotation in water, perhaps by streams or spring floods in swamps, may be an important dispersal mechanism.**

### **Conservation goals.**

What specific conservation goals should be met in order to change the conservation status or to remove the species from the state list? Please address goals for any or all of the following:

(a) State distribution, number of occurrences (populations), population levels, and/or reproductive rates

**In order to revise the rank of *C. baileyi* from Threatened to Special Concern, 20 or greater populations should be documented in the Commonwealth. In order to remove *C. baileyi* from the MESA list, greater than 50 populations should be documented.**

(b) Amount of protected habitat and/or number of protected occurrences

(c) Management of protected habitat and/or occurrences

### **Literature cited, additional documentation, and comment**

**Fernald, M.L. 1950. *Gray's Manual of Botany. Eighth Edition.* D. Van Nordstrom Co. New York.**

**Flora of North America Editorial Committee. 2002. *Flora of North America Volume 23. Commelinidae (in part): Cyperaceae.* Oxford University Press. New York.**

**Weatherbee, P. 1996. *Flora of Berkshire County, Massachusetts.* The Berkshire Museum.**

